Step-by-Step Guidance

GHG Emissions Reporting Using the California ARB On-Line Reporting Tool

Petroleum Refineries, Hydrogen Production Facilities, Oil and Gas Production Facilities

March 30, 2009

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Petroleum Refineries, Hydrogen Production Facilities, Oil and Gas Production Facilities ••••

Step-by-Step Guidance for GHG Emissions Reporting Using the California ARB On-Line Reporting Tool

This guidance was prepared to provide operators of petroleum refineries, hydrogen plants, and oil and gas production facilities with step-by-step instructions for reporting their GHG emissions using the on-line reporting tool developed by the California Air Resources Board (ARB). Such facilities are required to report their GHG emissions if the facility emits 25,000 or more metric tonnes of CO₂ from stationary combustion annually.

This document focuses primarily on the mechanics of entering your emissions and other data into the on-line GHG reporting tool. For instructions on calculating facility emissions, explanation of the regulation and examples of how to compute emissions, see the Instructional Guidance for Operators available via the main GHG Reporting page (http://www.arb.ca.gov/cc/reporting/ghg-rep/ghg-rep.htm). The Instructional Guidance includes detailed information about how to calculate GHG emissions for each facility type, as well as information for determining applicability. Chapters 1-6 describe the overall requirements of the regulation. Chapters 10 and 11 discuss reporting GHG emissions from Petroleum Refineries and Hydrogen Plants respectively, while oil and gas production is covered in Chapter 12. The Regulatory Activity link on the main GHG Reporting page includes the full text of the regulation.

Guidance documents are also available to help reporters understand and navigate the on-line reporting process. These documents may be accessed at the following links: Reporting Tool Primer (http://www.arb.ca.gov/cc/reporting/ghg-rep/ghgtoolprimer.pdf). Because the design and approach used within the tool may be unfamiliar to some, the Primer will give a good orientation to the overall use of the tool, and may help simplify the reporting process. Also, the Reporting Tool Users Guide (http://www.arb.ca.gov/cc/reporting/ghg-rep/ghgtoolusersguide.pdf) will be an important aid for reporting.

Considerations for Oil and Gas Production Facilities and Hydrogen Production Plants

Hydrogen production facilities and oil-and-gas production facilities follow procedures that are similar, in their respective ways, to those discussed in this document for petroleum refineries.

<u>Oil and Gas Production</u> - Oil and gas production facilities report GHG emissions following procedures that depend on fuel type. As general stationary combustion sources they will benefit from a review of the <u>Step-by-Step Guide for GSCs</u>. Unlike other general stationary combustion sources, however, default emission factors are generally not permitted. Measurements of fuel carbon content and/or heat value according to the frequencies and protocols specified by fuel type in the regulation will be used to develop estimates of annual emissions for direct input as "pre-calculated values" in the Reporting Tool (as described below for refineries).

<u>Hydrogen Production Plants</u> - Hydrogen production facilities, both merchant plants and those under operational control of a refinery, also follow procedures similar to refineries for data development and tool input. Hydrogen plants have unique opportunities to select in the Reporting Tool combined stationary combustion and process emissions, however. Options for reporting stationary combustion and process emissions are discussed in **Step Four** of this document, and reporting of hydrogen production and transferred CO_2 and CO is discussed in **Step Seven**.

STEP ONE Prepare for Reporting

Prior to reporting, it will be helpful to collect some overall information needed for reporting. You will be able to log in and return to the tool to complete reporting as needed, so all information does not need to be collected or entered all in one session. But the tool does not have an integrated tracking or "completion" wizard to monitor and track your progress in the reporting GHG emissions. Therefore, it will be important to track where you are in the reporting process to ensure that all required data are ultimately submitted. You will be prompted to provide several different types of information:

- 1. descriptive information about your facility,
- 2. personnel contact information,
- 3. annual emissions data, and
- 4. annual fuel and feedstock consumption data

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In the case of complex reporting facilities such as petroleum refineries and hydrogen plants where thousands of individual data entries may be required to calculate facility GHG emissions we strongly advise that reporters calculate facility emissions off-line. It will be much easier to use the on-line reporting tool to enter the aggregated data rather than use the limited calculation capability available in the tool.

STEP TWO Registering to Report

Registering:

- 1. From the Reporting Tool website: http://www.arb.ca.gov/cc/reporting/ghg-rep/ghg-rep.htm, there are links to the reporting tool.
- 2. If you have not already done so, follow the steps in Section 2.1 of the Reporting Tool Users Guide to register your facility using the ARB ID and Access Code mailed to you by ARB. During registration you will input basic facility and contact information, and create a self-defined User ID and password for accessing the reporting system. If you believe you are subject to reporting and did not receive an initial ARB ID and Access code, it is your responsibility to contact ARB at ghgreport@arb.ca.gov to request access to the Reporting Tool.

Important Note: As the first person to register a facility in the Reporting Tool and upon completion of your account information, you become a Facility Manager. Upon completion of your reporting, only a Facility Manager may certify the data for submittal to ARB. The Reporting Tool allows up to two people to be designated as Facility Managers for a facility (or entity).

- 3. Click on the Register tab to register for the first time (subsequent to registering you will Login with the user name and password which you will create). The initial information you enter when registering should be that of a Facility Manager. The tool allows designation of two Facility Managers and an unlimited number of Facility Reporters. When you have entered all the required data click NEXT.
- 4. Read and Accept or Decline the Terms of Usage for the Reporting Tool.

STEP THREE Facility Information

The Welcome Screen will be displayed after you accept the Usage Terms. As a Facility Manager you may:

- 1. Manage Facility Information
- 2. Report Annual Data
- 3. Certify Annual Data
- 4. View Reports

You will first set up your Facility Information.

- 1. Click on the Manage Facility Information link. A page entitled Facilities will be loaded. All the Facilities where you are the designated Facility Manager are displayed on this page.
- 2. Click on the **Facility Name** to access the Facility Information Page. **Note**: Facility Information is displayed and data may be added and edited in cases where a data entry box is available.
- 3. The secondary sectors that you have designated for your Facility will be highlighted in blue. You may add or delete Facility secondary sectors as necessary.
- 4. Note that you may not change the ARB ID or Access Code. Edit and enter data fields where necessary.
- 5. If you wish to designate non-emissions data contained in your report as Confidential, check the box at the bottom of the screen to indicate so. The Help option at the top of the page provides more information on this option.
- 6. Click **SAVE**. **NOTE**: The tool does not prompt you to **Save** data as you move from one screen to the next. If you do not **SAVE** prior to moving from page to page the changes and data you just added must be reentered.
- 7. Click the Addresses tab. This sheet will initially be populated with information from the ARB database used to contact reporters. Make changes as required, SAVE the data and click BACK to return to the Facility Information page. Any changes should be reflected in the Address field.

- 8. Next click the Geographic Location tab. The easiest way to determine the Latitude and Longitude of your facility may be to use the Google™ Maps feature. Click on the Google™ Maps box, use the zoom bar in the upper right corner of the display to zoom into your facility location, clicking and dragging the map to keep the facility location centered in the mapping field. In the case of larger facilities place the cursor as close as possible to the facility office or entry point. When you have located the cursor at the correct location for your facility, right click and choose the *get directions from here* option which appears in the pop-up box. A box will appear containing the latitude and longitude of the cursor. If this location appears correct, copy the latitude and longitude from Google™ Maps to the Geographic Location page in the same format (decimal degrees). Close the Google™ Maps application. If you choose to use a handheld or automotive GPS unit to determine your facility latitude and longitude, make sure the data is expressed in the NAD83 datum. Click SAVE when you have entered the required data on this page.
- 9. Adding Contacts Next click the Contacts tab. This feature allows Facility Managers to establish contacts those users who are permitted access to the on-line GHG data file for your facility. See Figure 1-2 User Roles in the Users Guide for more information concerning permitted roles and report access limitations for Facility Managers and Facility Reporters. Click Create New Contact to enter information for individuals that you wish to be associated with your facility reporting report. Enter information in the required date entry fields, click SAVE and then choose the appropriate role for the contact on the next page. The Add/Change tab allows you to choose a contact from individuals already registered with ARB. The End Contact Relationship allows Facility Managers to sever a relationship with an individual.
- 10. Adding Facility Documents The regulation requires that a facility emissions data report include supplemental information about its parent company or related companies (see 95104(a)(8) of the Regulation). This information can be developed in a spreadsheet or other type of document and uploaded into the Reporting Tool. The Facility Documents tab described in Section 2.1.4.5 of the Users Guide provides instructions on how to add documents to the Reporting Tool. The Facility Document tab may be used to add any type of additional documents that the reporter thinks are appropriate. Please note that any information provided to ARB becomes part of the emissions data report and could be requested as part of the Public Records Act.

STEP FOUR Add Emitting Activities and Devices

Prior to reporting fuel use and emissions, you must establish a database of all the Emitting Activities at your facility. Based on how the facility emissions are reported and the sector-specific requirements of the regulation, "Emitting Activities" could be either individual emission sources or aggregations of emission sources. You must also establish a database of devices (fuel meters) such that you can report device level fuel use at the last point of metering. The overall facility configuration is retained from year to year, and does not need to be input again unless there are modifications, additions, or deletions of emitting activities. In year one you will set up facility emitting activities for the sources that you are required to report. In subsequent years you will update the data associated with those sources, augmenting or modifying them as needed.

Adding Emitting Activities - This section of the guidance discusses the steps for adding emitting activities and setting up your account for reporting when first using the tool. Section 3 of the Users Guide illustrates in further detail the set-up of emitting activities.

Establishing the reporting framework for your facility emissions report requires an understanding of what the regulation requires -- see sections 95113 (refineries), 95114 (hydrogen plants), and 95115 (general stationary combustion facilities) and the related *Instructional Guidance* chapters as appropriate. In general you will want to set up an Emitting Activity for each of the emission sources that the regulation requires you to report; stationary combustion may be aggregated. For petroleum refineries there are seven Emitting Activity Categories (see below and Table 1) that may be reported.

- 1. Stationary Combustion
- 2. Stationary Combustion and Process
- 3. Process
- 4. Fugitive
- 5. Flares and Destruction Devices
- 6. Optional (Mobile, but not limited to Mobile)
- 7. Portable Equipment

Table 1. Reporting Tool Emitting Activity Categories

Emitting Activity	Comments	Activity Types
Category Stationary	Croata an Emitting Activity	Multiple Sources (list all fuels
Combustion	Create an Emitting Activity page for Stationary	Combusted)
Compastion	Combustion. Choose Multiple	Refinery Fuel Gas
	Sources for the Activity	Natural Gas and Associated Gas
	Type. Use this Emitting	Fuel Mixtures
	Activity to report CO ₂ , CH ₄	Other Fuels
	and N ₂ O emissions for all fuels	Low Btu Gases
Stationary	Use for 1) Hydrogen Plant	Hydrogen Plant(s) Combined (Stationary
Combustion and	reporting combined	and Process)
Process	Stationary Combustion and Process emissions, and 2)	Combined Stationary and Process (CEMS)
	CEMS measuring both	Combined Stationary and Process (CLWS)
	Stationary and Process	
	emissions	
Process	Create an Emitting Activity	Asphalt Production Blowing Stills
	page for each applicable	Catalytic Cracking (FCCU)
	pProcess eEmission category.	Periodic Catalyst Regeneration
	Create a Hydrogen Plant	Hydrogen Plant(s)
	Emitting Activity here if you plan to report Process and	Continuous Catalyst Regeneration (other than FCCU)
	Stationary Combustion	Process Vents
	separately.	Sulfur Recovery Units
Fugitive	Create an Emitting Activity	Equipment Fugitive Emissions (use for
	page for each applicable	SF ₆) use also for equipment fugitives
	Fugitive Emission Source	Oil/Water Separators (general)
		Storage Tanks
Flance and	Consider on Englishing Activity	Wastewater Treatment (general)
Flares and Destruction	Create an Emitting Activity page for each applicable	Flares
Desti detion	category	Other Control Devices
Optional (Mobile,	Create an Emitting Activity	Mobile (vehicle) emissions and other
etc.)	page if you plan to voluntarily	emission sources you wish to voluntarily
	report facility related mobile	report (e.g. coke calciner emissions)
	emissions <i>OR</i> other emission	
	sources not covered by the	
	regulation (whether or not	
Portable	mobile). Create an Emitting Activity	Generators
Equipment	page if you plan to voluntarily	Other
	report portable equipment	Multiple Sources
	emissions	·

Initially there will be no Emitting Activities listed for your facility. To start the process click the **Emitting Activities** tab. You will see the Add Emitting Activity page shown below in Figure 1.

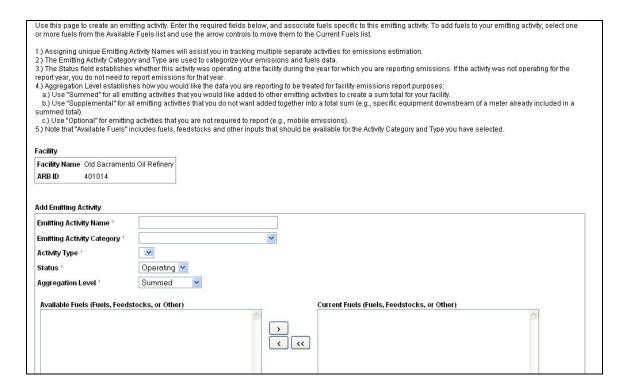


Figure 1. Add Emitting Activity Screen

On the Add Emitting Activity page the following fields must be populated.

Table 2. Emitting Activity Data Fields

Data entry field	Comments
Emitting Activity Name	Enter a unique name here
Emitting Activity Category	Choose an Emitting Activity category (see Table
	1) form the pull-down menu
Activity Type	Choose Multiple Sources
Status	Operating or Shutdown. Choose from pull-
	down menu - if Shutdown is chosen tool will not
	expect data entry for this Emitting Activity
Aggregation Level	Summed - choose for all Emitting Activities
	Supplemental - use where double counting is
	possible
	Optional - use for all Emitting Activities you
	are voluntarily reporting
Available Fuels (Fuels, Feedstocks,	Identify all fuels and feedstocks for which you
or Other)	must report usage data. Highlight left column
	selection, click > to move choice to right
	column

Stationary Combustion Emissions - Establish a Stationary Combustion field (Emitting Activity) to report CO₂, CH₄, and N₂O emissions. The reporting

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regulation requires reporting CO_2 , CH_4 , and N_2O emissions for five fuels or fuel categories (see below).

- 1. Refinery Fuel Gas
- 2. Natural Gas and Associated Gas
- 3. Fuel Mixtures
- 4. Other Fuels
- 5. Low Btu Gases

In addition to Stationary Combustion CO_2 emissions you are required to report Stationary Combustion CH_4 and N_2O emissions. After establishing a single Stationary Combustion Emitting Activity, and listing all the fuels combusted at your facility, the tool allows you to report CO_2 , CH_4 , and N_2O for each fuel you have listed. See Figure 2 below. Here we have named this Stationary Combustion Emitting Activity - All Refinery Stationary Combustion. Note that your facility may not combust all of the fuels listed.

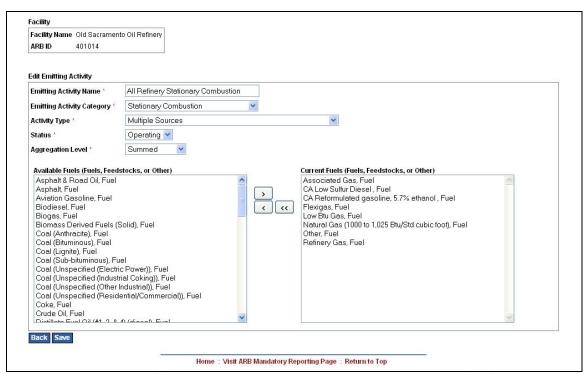


Figure 2. Establishing an Emitting Activity for Stationary Combustion

Stationary Combustion and Process Emissions - Use this Emitting Activity Category to set-up Emitting Activity pages for situations where you wish to report Stationary Combustion and Process emissions together as a single value (e.g., use of CEMS data). Note that Emitting Activity - Hydrogen Plants appears in both the Stationary Combustion and Process and Process Emitting Activity Categories. This is because the regulation provides reporters with the Refineries, Hydrogen Plants, Oil & Gas Production Facilities GHG Reporting Tool

option of reporting Hydrogen Plant Stationary Combustion and Process together or separately. If you plan to report Hydrogen Plant stationary combustion and process emissions separately, report plant stationary combustion emissions as part of the fuel specific stationary combustion emissions and establish a separate Emitting Activity for hydrogen plant process emissions. The reporting regulation allows the reporting of aggregate Stationary Combustion and Process Emissions in two situations – hydrogen plants and CEMS where the system measures combined combustion and process emissions. See Table 3 below.

Table 3. Emitting Activities - Stationary Combustion and Process Emissions

Tool Data Heading	Emitting Activities - Options for Combined Facility Stationary			
	Combustion and Process Emissions			
Emitting Activity	Hydrogen Plant (additional info if	CEMS (additional information if		
Name	required to differentiate multiple	required to differentiate multiple		
	hydrogen plants)	CEMS)		
Emitting Activity	Stationary Combustion and Process	Stationary Combustion and Process		
Category				
Activity Type	Hydrogen Plant(s) Combined	Combined Stationary and Process		
	(Stationary and Process)	(CEMS)		
Status	Operating (if operated during the	Operating (if operated during the		
	report year)	report year)		
Aggregation Level	Usually Summed; Supplemental	Usually Summed; Supplemental		
	may be used to avoid double-	may be used to avoid double-		
	counting	counting		
Current Fuels	Choose applicable fuels and	Choose applicable fuels and		
	feedstocks	feedstocks		

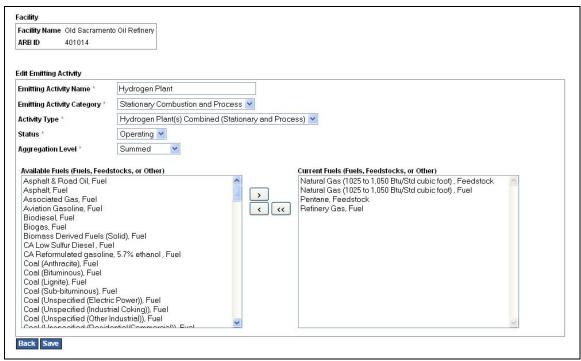


Figure 3. Establishing a Stationary Combustion and Process Emitting Activity

Process Emissions - This Emitting Activity Category is used to set up Emitting Activity pages for each of your facility's Process Emission sources. See Table 4 below, where the Emitting Activity categories available for reporting Process Emissions are listed. Notice that the category Hydrogen Plant(s) is one Activity Type that may be established here. Use this category to create an Emitting Activity page for each Hydrogen Plant where you plan to report Process Emissions separate from Stationary Combustion emissions.

Table 4. Emitting Activities - Process Emissions

Tool Data Heading	Emitting Activities - Facility Process Emissions						
Emitting Activity Name (enter unique process name)	Cat Cracking (FCCU)	Other Cat Regen - periodic	Hydrogen Plant(s)	Other Cat Regen - continuous	Process Vents	Asphalt blowing - un- controlled	Sulfur Recovery Units
Emitting Activity Category	Process	Process	Process	Process	Process	Process	Process
Activity Type	Catalytic Cracking	Periodic Catalyst	Hydrogen Plant(s) (if SC	Continuous Catalyst	Process Vents	Asphalt Production	Sulfur Recovery

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	(FCCU)	Regen	and Process reported separately)	Regen (other than FFCU)		Blowing Stills	Units
Status	Operating	Operating	Operating	Operating	Operating	Operating	Operating
Aggregation Level	Summed	Summed	Summed	Summed	Summed	Summed	Summed
Current	FCCU	Other	Enter	Other,	Other	Asphalt	Acid Gas,
Fuels	Coke	input, Other	feedstocks	input, Other	input, Other	Blown, other	Other

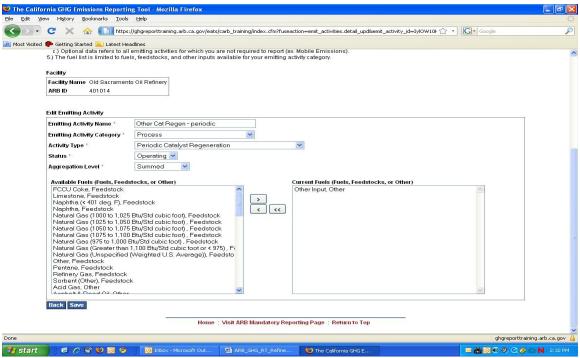


Figure 4. Establishing a Process Emitting Activity

Fugitive Emissions - This Emitting Activity Category is used to set up Emitting Activity pages for each of your facility's Fugitive Emission sources. See Table 5 below where the Emitting Activity categories available for reporting Fugitive emissions are listed. Create an Emitting Activity for each Fugitive Emission that you are required to report at your facility. See the example in Figure 5.

Table 5. Emitting Activities - Fugitive Emissions

Tool Data Heading	Emitting Activities - Facility Fugitive Emissions			
Emitting Activity	Wastewater	Oil/Water	Storage Tanks	Equipment
Name (enter unique	Treatment	Separators	_	Fugitive

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emissions identifier)				Emissions
Emitting Activity	Fugitive	Fugitive	Fugitive	Fugitive
Category				
Activity Type	Wastewater	Oil/Water	Storage Tanks	Equipment
	Treatment	Separators		Fugitive
	Facilities (General)	(General)		Emissions (use for
				SF ₆)
Status	Operating	Operating	Operating	Operating
Aggregation Level	Summed	Summed	Summed	Summed
Current Fuels	Wastewater	Other input,	Asphalt, Other	Other input,
	Treated, Other	Other	Crude Oil Other	Other
			Naphtha, Other	

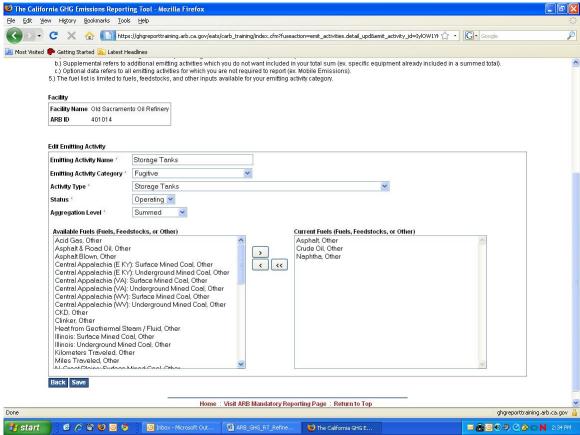


Figure 5. Establishing a Fugitive Emitting Activity

Flares and Other Destruction Devices - This Emitting Activity Category is used to set up Emitting Activity pages for emissions from Flares and Other Destruction Devices at your facility. See Table 6 below, where the Emitting Activity categories available for reporting Flares and Destruction Device emissions are listed.

Table 6. Emitting Activities - Flares and Other Destruction Devices

Tool Data Heading	Emitting Activities - Flares and Destruction Devices			
Emitting Activity	Flares	Other Destruction Devices		
Name(enter unique				
emissions identifier)				
Emitting Activity	Flares and Destruction	Flares and Destruction		
Category				
Activity Type	Flares	Other Control Devices		
Status	Operating	Operating		
Aggregation Level	Summed	Summed		
Current Fuels	Other Fossil Based Wastes, Fuel	Other Fossil Based Wastes, Fuel		

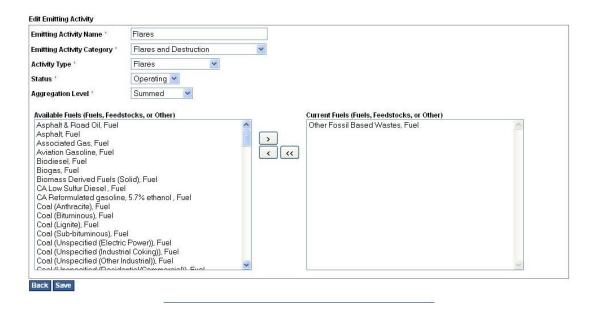


Figure 6. Establishing a Flare/Other Destruction Device Emitting Activity

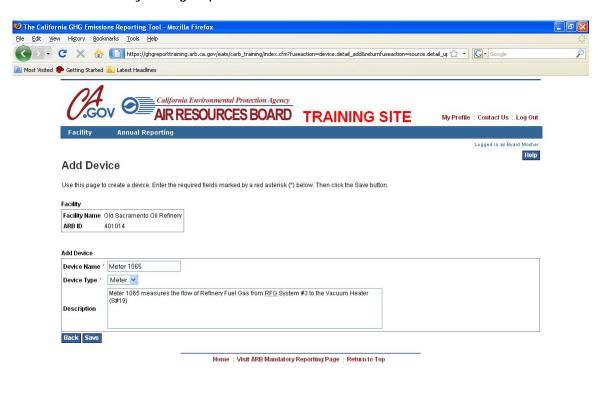


Figure 7. Example Facility Information Emitting Activity report structure for a Petroleum Refinery

When you complete the process of setting up Emitting Activities for all emission sources at your refinery, the Facility Information Emitting Activity summary page should look something like that seen above in Figure 7.

Adding Devices - You must also establish a database for your fuel meters so that you may report fuel use at the last point of metering. To do this return to the Facility Information page, select the Devices tab, and click the Add Device tab at the bottom left corner of this page. On the Add Device page enter a Device Name, choose Meter for the Device Type, and enter descriptive information to help identify the specific meter in question (see Figure 8 below). Save the data, select the Add Device tab and repeat the process until you have added all your facility fuel meters.

ARB staff understands that for many facilities reporting fuel consumption for each meter can be very time-consuming. Optional methods (bulk download and/or spreadsheet submission) for reporting device level fuel consumption data are currently being explored.



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STEP FIVE Reporting Emissions and Fuel and Feedstock Consumption

Once you have set up the reporting framework for your facility - establishing Emitting Activities for each emissions source and device level metering - you are ready to start entering emissions data and fuel and feedstock consumption data.

Reporting Emissions - To begin this process, place the cursor over Annual Reporting in the blue banner at the top of the page, and click on Create New Submission in the pull down menu. You will next see the Select Submission Details page (Figure 9). For 2009 the Report Year and Reporting Period default to 2008 and 01/01/2008 - 12/31/2008 respectively. These fields cannot be changed in the 2009 report year. Choose Facility for your Reporting Level and Emissions and Fuels for the Submission Type. You will use the second Submission Type option, Energy and Production to report purchased Indirect Energy and Hydrogen Production later in the reporting process.

NOTE: Editing Emissions Data - Facility emissions data can be edited at any time prior to locking the data submissions for verification. Click either the Review Draft Submission tab or the View Emissions Data tab, highlight the fuel which you want to edit and click the Edit Record tab. Edit the data as necessary and Save to save changes.

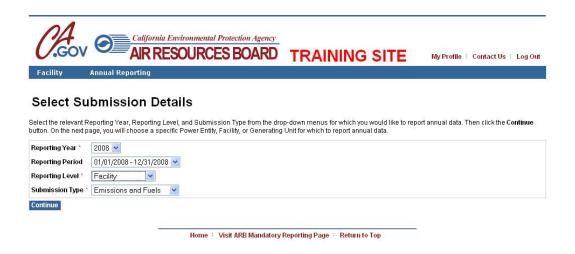


Figure 9. Selecting Submission Details for Your Facility GHG Report

Choose Continue when you have selected the proper inputs. On the Select Facility page which loads next, choose the Facility for which you wish to enter data by clicking and highlighting the Facility name, and click Continue. The Review Annual Emissions and Fuels Submission page will load (see Figure 10 below).

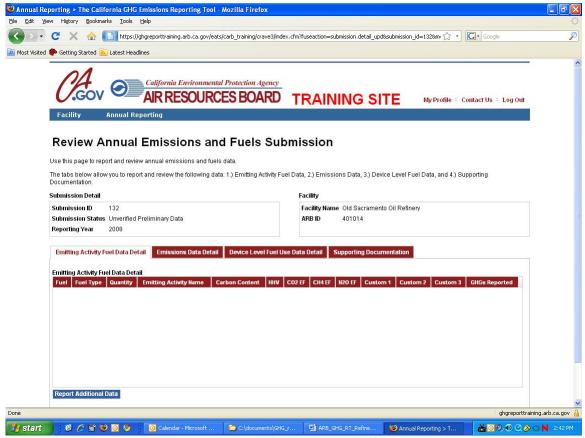


Figure 10. Review Annual Emissions and Fuels Submission

NOTE: Changing data table column widths and display appearance. When you see pages such as the Review Annual Emissions and Fuels Submission page (Figure 10) where tables of data are displayed, the column width and order in which the columns are displayed may be changed. To change column width place the cursor over the vertical column in the display bar and the cursor will change to a vertical bar with arrows point right and left. Click and hold the left mouse button and drag the column divider and drop it. To move columns and change the display order, move the cursor over the column text box until the cursor changes from an arrow to a hand, then click and hold down the right mouse button. Drag the text box to the new position until the text box icon changes from ⊘ to a circle with a green check mark, and drop the column in the column lineup where you want it.

Click the option Report Additional Data at the bottom left corner of this page. A page entitled Select Emitting Activity will appear (Figure 11). Here you will see a Table listing all facility emitting activities that you have created. Note that the emitting activity table may be more than one page in length. You will now enter both emissions and fuel and feedstock consumption data for each of these facility emitting activities.

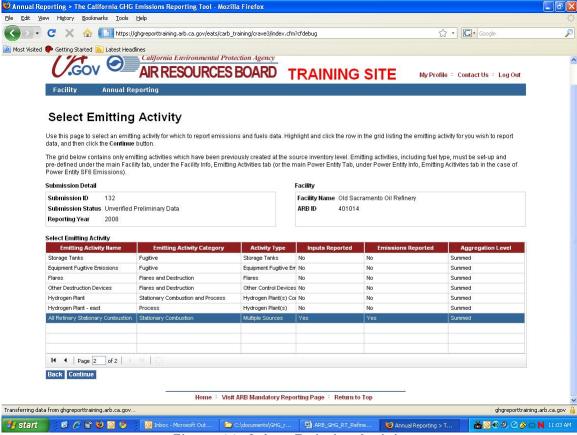


Figure 11. Select Emitting Activity

In this illustration we have selected the All Refinery Stationary Combustion Emitting Activity field. We will next proceed to enter the amount of each of the fuels or fuel categories combusted at the facility and the associated Stationary Combustion emissions associated with this combustion. Highlight the Emitting Activity Name and click Continue.

1. Select Fuel from the Grid (see Figure 12 below). Highlight the emitting activity for which you wish to enter data by clicking on the emitting activity line in the Table. Click Continue. Next you will see a page entitled Activity Fuel Use (Figure 12). On this page you will enter the amount of fuel (and when appropriate, feedstock) associated with this emitting activity that was consumed for the report year at the facility.

Highlight the fuel in the Emitting Activity fuels grid list and the fields below the grid will become active (see Figures 12 and 13). In the example shown below we are entering fuel consumption and emissions data for the first Emitting Activity - Stationary Combustion of Refinery Fuel Gas.

In the field 1. Select Fuel from the Grid highlight a fuel (in this case Low Btu gases) in the Fuel Grid (see Figure 12 below).

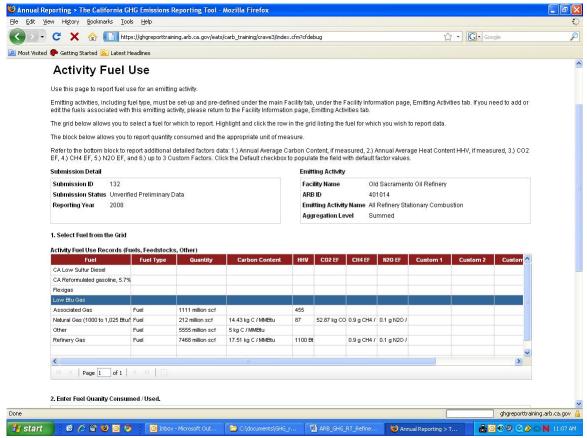


Figure 12. Selecting a fuel from the Emitting Activity grid

Enter the amount of the fuel consumed/used in Section 2 Quantity Consumed box (Figure 13) of this page (in the example 2009) and choose the correct Units of Measure (millions scf) from the Units of measure pull-down menu.

Note: In the Emitting Activity cases where there is not a requirement to report

fuel or feedstock consumption (e.g. fugitive emissions), there are two approaches to reporting emissions.

- 1. You may enter 0 (zero) for the **Quantity Consumed**. If you choose this option the final report will list the zero for the Fuel Name.
- 2. You may also leave the Quantity Consumed field blank. In this case the reporting grid will display the emissions you have entered along with an additional field called "Remainder." It is not necessary to enter emissions for the Remainder category, but it may be useful for certain fugitive emissions.

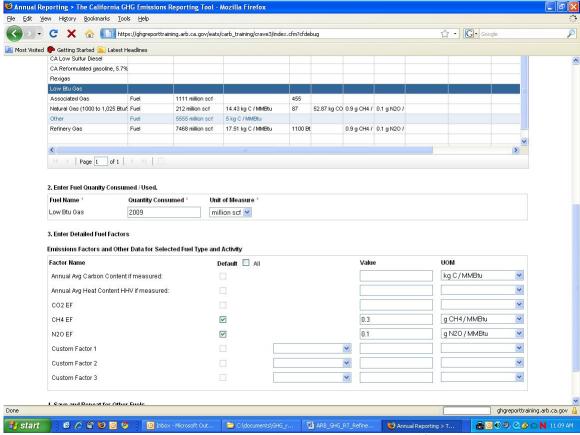


Figure 13. Enter Fuel Quantity Consumed/Used

Next we must identify and/or enter any Emission Factors used to calculate emissions. Check the Default EF boxes for CH_4 and N_2O .

Click **Save** and the data entry fields appear grayed out. If there are other fuels or feedstocks connected to this Emitting Activity click **Back** and repeat the process for each fuel and feedstock.

Next click Report Emissions and the Report Emissions (Figure 14) page will load. In section 1 (1. Select Fuel) highlight the fuel in the fuel column for which you wish to enter emissions (in this case Low Btu gases).

Note the Tabs for CO₂ CH₄ and N₂O found across the top of box entitled: 2. Select Report Emissions and Calculation Method for Each GHG.

The CO₂ (Carbon Dioxide) tab will be active when this page first opens. Check the Report Emissions box, select Best Available - Pre-Calculated from the Select Calculation Method pull-down menu, enter fuel emissions (in this case Refinery Fuel Gas emissions of 508679) and choose the units (in this case the only option is metric tonnes).

Note: An error message will be displayed if you use commas in your numeric entries.

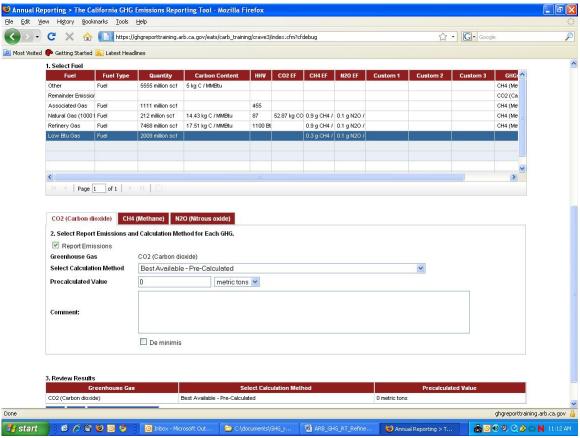


Figure 14. Reporting Emissions

Repeat this process to report CH_4 and N_2O emissions. Click the CH_4 (Methane) and N_2O (Nitrous Oxide), check the Report Emissions box, choose Best Available- Pre Calculated from the Select Calculation Method pull-down menu and enter the Precalcuated Value.

You may enter comments if you wish, and check the *De minimis* box if you are reporting these emissions as *De minimis*. Click **Save**.

Repeat this process for each of the fuels and feedstocks associated with your Emitting Activities. Use the **Back** tab to navigate back to the **Select Emitting Activity** page (Figure 11), highlight the next **Emitting Activity** and **Continue**.

STEP SIX Reporting Device Level Fuel Consumption

Once you have completed data entry for all facility Emitting Activities you must report fuel consumption at the last level of metering. You should have already established your Device (Fuel Meter) database in Step Four. To report device level fuel use, navigate to the Review Annual Emissions and Fuels Submission page and select the Device Level Fuel Use Data Detail tab (see Figure 15 below).

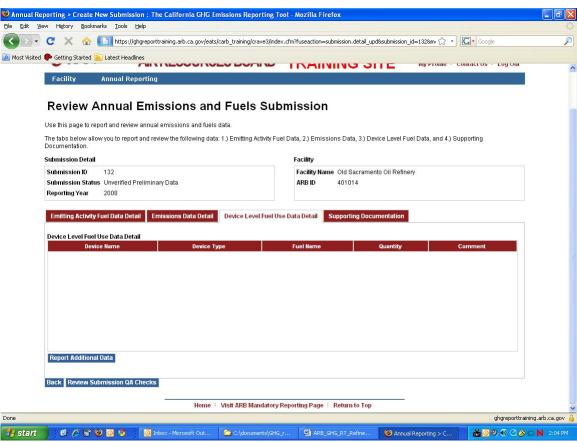


Figure 15. Device Level Fuel Consumption Reporting

Reporting Device Level Fuel Consumption Data (see Figure 16)

- 1. Click the Report Additional Data tab
- 2. Select a Meter from the Device Name pull-down menu
- 3. Select the type of fuel metered from the Fuel pull-down box
- 4. Enter the quantity of fuel consumed in the Quantity Measured box
- 5. Choose the units of measure from the Units pull-down menu

- 6. Add comments in the Comments box
- 7. Save and repeat the process to enter fuel data for additional meters.

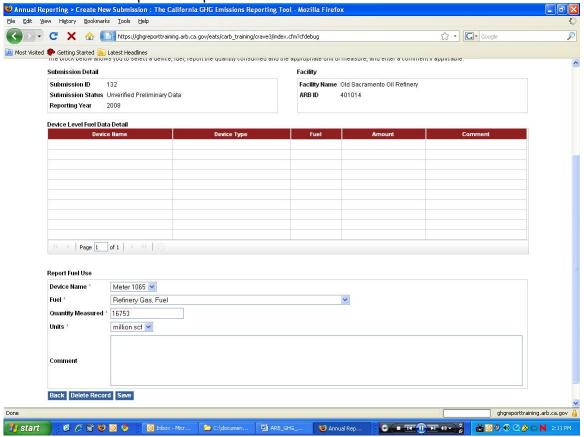


Figure 16. Reporting Device Level Fuel Data

STEP SEVEN Reporting Indirect Energy Use and Other Data

Petroleum Refineries, Hydrogen Production Plants, and Oil-and-Gas Production Facilities are required to report certain Energy and Production data. These facilities must report indirect or purchased energy (thermal and electricity), hydrogen production, hydrogen sold as transportation fuel, and transferred CO₂ and CO where applicable. To begin this process select the Annual Reporting option found in the Blue Bar at the screen top and click on the Create New Submission selection from the pull-down menu. On this page select the appropriate Reporting Year (2008), Reporting Period (01/01/2008-12/31/2008), Reporting Level (Facility), and Submission Type (Energy & Production) see Figure 17 below.



Figure 17. Energy & Production Reporting

Select Continue when you have input the correct information on this page. You will then see the Annual Energy and Production Submission page (Figure 18). There are three tabs available - Indirect Energy Use, Hydrogen, and Supporting Documentation. You will use these tabs to enter the required Energy and Production data.

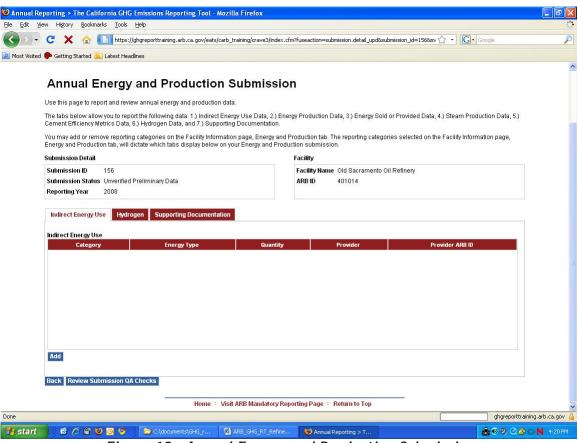


Figure 18. Annual Energy and Production Submission

Reporting Indirect Energy - select the Indirect Energy Use tab (the back ground will appear white when this option is selected). Select the Add option tab in the lower left corner. The Report Data page (Figure 19) will load.

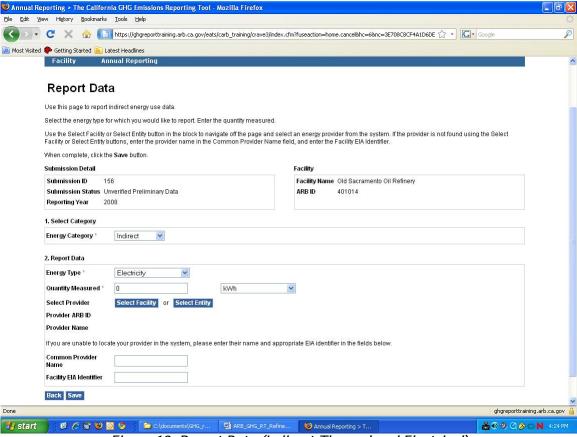


Figure 19. Report Data (Indirect Thermal and Electrical)

Enter the required data on this page.

- 1. Select Category
 - **Energy Category** Indirect (this is the only selection available)
- 2. Report Data report both indirect electricity and thermal energy Energy Type

Electricity

Quantity Measured - enter kWh of indirect electricity

Units - kWh (only option)

Select Provider - Select Facility or Select Entity and choose supplier from list

Thermal

Quantity Measured - enter Btu of indirect thermal Units - Btu (only option)

Select Provider - Select Facility or Select Entity and choose supplier from list

If you cannot find your electrical or thermal supplier in either of the lists provided by the tool, enter your Common Provider Name and Facility EIA Identifier in the fields provided at the bottom of this page. SAVE all entered data.

Reporting Hydrogen Production and Transferred CO₂ and CO data
If your facility produced hydrogen you must report additional data. Go back to
the Annual Energy and Production Submission page (Figure 18) and choose
the Hydrogen tab - you will see the following page:

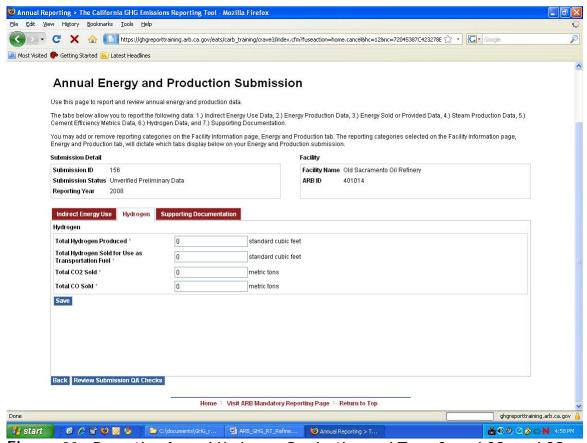


Figure 20. Reporting Annual Hydrogen Production and Transferred CO₂ and CO

Enter data for the four data fields as appropriate. The units of measure cannot be changed. Insure that the data you enter is in the correct units.

The Supporting Documentation tab may be used to upload clarifying and/or supporting documents. Select this tab and then select the Add tab to add documents.

STEP EIGHT Quality Assurance Checks and Preparing for Certification

Prior to locking down your facility emissions data report and beginning the Certification process you should carefully examine the data contained in the report. An Internal Reports option will be available soon.

Reporters should also examine any error messages generated by the tool diagnostic function. There are two separate steps for certification,

- 1) Certifying Fuels and Emissions data, and
- 2) Certifying Energy and Production data

To prompt the reporting tool to run a QA check:

- 1. Login to the reporting tool website.
- 2. Select Report Annual Data. Set the Reporting Level to Facility, And Submission Type to Emissions and Fuels, and click Continue. Repeat this process for your Energy and Production submission.
- 3. On the Select Facility page, highlight the facility for which you wish to run a QA check and click **Continue**.
- 4. On the Review Annual Emissions and Fuels Submission page choose the Review Submission QA Checks option at the bottom of the page.
- 5. The Review Submission QA Checks page lists all warnings or errors associated with your fuels and emissions data submittal. You will see four grids where error messages will be displayed:

QA: Emitting Activity Fuel Data

QA: Emissions Data

QA: Device Level Fuel Use QA: Source Inventory Data

- 6. You should review carefully to see if the tool has identified any errors you made in your data entries. 'Warning' errors do no prevent you from certifying your emissions report, but you should be able to explain them. 'Critical' errors prevent certification and must be resolved.
- 7. If you have no 'Critical' errors, you can click **Ready for Certification** at the bottom of the page. This indicates to the facility manager that the data are complete for emissions and fuels. Repeat the process for **Energy and Production** after selecting that row.

8. Once you click **Ready for Certification**, the Annual Reporting page will load. The facility manager will select the **Emissions and Fuels** and **Energy and Production** rows in turn by clicking on each, review the QA checks again, and complete the certification process. (Make sure you certify both sets of data. See Section 9.0 of the Users Guide for more details about QA checks and certification.